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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,144	09/23/2003	Esko Alanen	881B.0006.U1(US)	1370
29683	7590	09/20/2006	EXAMINER	
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			NGUYEN, HUONG Q	
			ART UNIT	PAPER NUMBER
			3736	
DATE MAILED: 09/20/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,144

Applicant(s)

ALANEN ET AL.

Examiner

Helen Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 1-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9/23/2003
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the preliminary amendment filed 9/23/2003. Claims 4-6 are amended. Claims 7-10 are new. **Claims 1-10** are pending.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Finland on 3/23/2001 and 3/21/2002. It is noted, however, that applicant has not filed a certified copy of the 20010601 and PCT/FI102/00234 application as required by 35 U.S.C. 119(b).

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 9/23/2003 is/are acknowledged. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

4. **Claims 1-10** are objected to because of the following informalities:

It is unclear by what is meant by "arid" recited in **Claim 1**.

Regarding **Claim 7**, "whereat" should be "wherein"

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-2 and 4-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Lang (WO 99/08597), in view of Malicki et al (US Pat No. 4918375), further in view of Amerena (US Pat No. 4860753), and even further in view of Zhao (US Pat No. 5833686).

7. Lang discloses a method and apparatus comprising an electromagnetic probe placed on the skin to measure edema comprising a frequency unit and a unit for calculating measured values and tissue edema, referred to as "computational unit" (see Claim 1 and 18). However, Lang does not disclose the probe as a coaxial probe with two electrodes having a distance of 2-10 mm in between, the edema scored by measuring the capacitance of the probe as proportional to the dielectric constant of the skin and subcutaneous fat issue and proportional to the water content of the skin, nor using a frequency of approximately 20-50 MHz.

8. Malicki et al teach that there is a known relationship between the dielectric constant of a material and its water content, and that the calculation of said water content can be based upon the relative changes of the capacitance of an electromagnetic probe (abst, col. 1 line 10-18).

9. Amerena discloses probe used to measure the water content of skin comprising two concentric electrodes spaced in the range of 2-10 mm as an effective device for such purpose, best seen in Figure 2 (Col.2, line 42-45, abst).

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10. Zhao teaches that it is known to use a frequency of about 50 MHz to effectively treat many skin conditions as such frequency will penetrate skin without side effects (abst).

11. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and apparatus of Lang such that the capacitance of the probe is proportional to the dielectric constant of the skin and fat tissue, which is further proportional to the water content of the skin, as taught by Malicki et al, due to the known relationship between said elements to give rise to an effective method and apparatus for measuring tissue edema.

12. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and apparatus of Lang as modified by Malicki to use a coaxial probe having two electrodes with a distance of 2-10 mm between, as taught by Amerena, as an effective method and apparatus for measuring tissue edema.

13. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and apparatus of Lang as modified by Malicki and Amerena such that a frequency of 50 MHz is used to determine edema, as taught by Zhao, because such frequency is effective for penetrating skin and treating skin conditions, such as tissue edema.

14. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lang in view of Malicki et al, further in view of Amerena, and even further in view of Zhao, and further in view of Sherwin (US Pat No. 4640290). Lang in combination with Malicki et

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al, Amerena, and Zhao disclose the method described above but do not teach the probe secured to the skin by an attachment such as a strap for continuous edema monitoring. Sherwin teaches using straps as an effective method of attaching a probe to the body of a patient (Col.4, line 15-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Lang as modified by Malicki et al, Amerena, and Zhao to use a strap attachment, as taught by Sherwin, to aid in securing the probe to the skin for continuous monitoring.

Conclusion

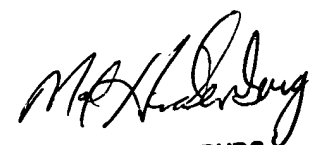
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen Nguyen whose telephone number is 571-272-8340. The examiner can normally be reached on Monday - Friday, 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HQN
9/5/2006



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